

**Abstract**

A system ~~(600)~~ for selectively generating training data for a pattern recognition classifier includes an image synthesizer ~~(606)~~ that combines a plurality of training images from an output class into a class composite image. A grid generator ~~(608)~~ generates a grid pattern representing the output class from the class composite image. A feature extractor ~~(610)~~ extracts feature data from the plurality of training images according to the generated grid pattern.